Draft Meeting Minutes
Suisun Marsh Levee Investigation Sub-Team Meeting
December 20, 1999 at 2:00 p.m. in room 1142 of the Resources Building

Attendance List:

Bob Batha, Bay Conservation and Development Commission
Steven Chappell, Suisun Resources Conservation District
Rob Cooke, CALFED Levee Program Manager
Gil Cosio, MBK Engineers
Chris Enright, DWR Environmental Services Office
Kamyar Guivetchi, DWR Suisun Marsh Branch
Gwen Knittweis, CALFED Levee Program (Team Chair)
Arnold Lenk, Suisun Resources Conservation District and RD 2127
Curt Schmutte, DWR Central District
Dave Showers, DWR Central District

There was discussion prior to the meeting regarding a request by Curt Schmutte for CALFED to provide guidance for current Central District actions in the Suisun Marsh. It was acknowledged that, although specific plans have not been made for Suisun Marsh levees, preliminary analysis shows that it will be an area of focus for CALFED. There is a recent levee break in the NW Marsh that is forcing the issue. It was resolved that Curt Schmutte would draft a letter for CALFED to send to DWR providing direction. The letter would be distributed over the e-mail reflector for group review. Curt is especially concerned with the levees bordering Honker Bay which would have long-term WQ impacts from breaching according to preliminary modeling results.

Following the discussion, Gwen Knittweis convened the scheduled agenda items and had the group introduce themselves. Chris Enright presented the first agenda item regarding the status of modeling efforts. Chris recapped that 10 modeling scenarios were carried out by ESO and that RMA performed 3 out of the 10 scenarios for a 4 month time period to corroborate ESO's results. The results generally corroborated except for the Van Sickle Island scenario. Because the time periods were different for ESO and RMA, Chris performed a model run using the same 4-month time period and average hydrology to further verify consistency of results. The IEP Hydrodynamics Work Team (including top hydrodynamicists in the field such as Ralph Cheng) provided peer review and approved of the approach used by DWR and RMA. Thus the results are generally corroborated for the level of analysis.

Chris concluded from the modeling that the opening size is less critical as you move away from the main channel. Thus they found no large difference in salinity change between 5,000 and 100 foot openings in the upper areas.

Although satisfied with the shallow water habitat scenario corroboration, Chris indicated a desire to corroborate the tidal marsh scenarios. He mentioned that in order for DWR to model the tidal marsh scenarios, they had to deepen the pond bottom (because the model cannot dry out). Chris suggests RMA perform two additional runs for corroboration of

tidal marsh scenarios: large and small breaches with more realistic pond bottoms. It was mentioned that there is no very accurate data on pond bottom elevations currently available. Steve mentioned that he has pond elevation data but does not have a reference point.

RMA would be able to generate these results by the end of February (prior to the Bay-Delta Modeling Forum that Chris will be presenting the results at). Chris got a cost estimate for the work from RMA: run the same scenarios w/ a realistic pond bottom for wide and narrow breaches will be $15,000 for 1 month of work.

In addition, Kamyar recommends that RMA run the models in a historical way. It was suggested that the initial studies should be used. This would cost approximately $15,000 for a 2 yr. simulation and would take 21 days of continuous modeling to complete. Chris indicated that RMA believes additional calibration is required before long-term historical modeling will be meaningful. RMA would like to further improve the geometry, delta island consumptive use, and CCFB gate operation. Additional data preparation, code revision, and calibration would cost $32,000 and would be completed by next October.

It was again mentioned that the 2 off-bay area models corroborated well and that the Van Sickle scenario was the one that diverged. Chris noted that it is unclear whether salinity change would be 15% above the base vs. 5-10% above or what the true results (1D or 2D) would be. Kamyar suggested that RMA run Van Sickle which would be $47,000 ($32,000 for refined calibration and $15,000 to model). It was suggested that at the very least the $32,000 calibration effort be recommended for future more detailed planning studies. It is desirable to find out why there was a difference in models. The difference in results points to sensitivity of salinity in modeling.

It was mentioned that evidence is leading to the conclusion that CALFED should get involved and recommend more detailed studies for planning. It was suggested that for the current level of analysis the group look at scenarios throughout geographical clumps and suggest planning efforts be directed in more important areas. Steve mentioned that he saw the Suisun Marsh levees as a package deal. Suisun Marsh landowners currently bear 100% of the cost of levee maintenance. Arnold Lenk suggested that perhaps there could be a tiered approach to cost-sharing based on priorities.

Steve mentioned that in order to look at the biological significance, we want assurance that modeling is correct.

Curt mentioned that a trends analysis shows a definite negative trend in salinity for certain areas. Curt mentioned that we would want to quantify public benefits first since we don't want to come up with a political solution and then try and fit it to public benefits. It was suggested that the group spell out fully the potential benefits and leave it to policy group to decide.

Gil Cosio of MBK made a presentation on cost estimate assumptions. MBK will be starting preliminary cost estimate work. Gil reviewed the Ramlit report in an effort to

collect all existing data that is reasonable. The levee reconstruction plan outlined in the Ramlit report cost $52 million. In reviewing the status of levees, Ramlit took qualitative approach to get a good idea of the problem areas. They classified 5 different types of levees in a 200 mile span. There was a wide variety in the character of the levees. Some levees experience 70% shrinkage. Some protect against tidal and fluvial flooding. Gil noted that the report was completed nearly 20 yrs ago and that the levees have since been strengthened. It was questioned where Ramlit assumed the material was coming from for the cost estimate. Gil mentioned that Ramlit assumed partial use of dredged materials. The point was made that one must consider the loads on levees in Suisun because the levees could sink under too much weight.

Gil mentioned that there will be some field drilling to come up with the construction type and field surveys of approximately 20 miles of levees to come up with levee characterizations. MBK will get samples from different spots both North and South. For cost estimation, MBK will focus on areas critical to CALFED. The strategy will be to find out if and where the levees need repair, then figure out cost. Gil noted the levee classifications from Ramlit:
A & B- Major reconstruction; 20 miles
C-major repair; 129 miles
D & E- good shape 44-45 miles